

REMARKS

In response to the Office Action mailed March 8, 2004, the Applicant respectfully requests reconsideration in view of the above claim amendments and the following remarks. The claims as presented are believed to be in allowable condition.

The Specification has been amended to correct a typographical error on page 10. No new matter has been added.

Claims 1-8 and 18-25 are rejected under 35 U.S.C. § 102(b) as being anticipated by Chan et al. (U.S. Patent 6,038,624, hereinafter "Chan") and under 35 U.S.C. § 102(e) as being anticipated by Sakarda et al. (U.S. Patent 6,594,721, hereinafter "Sakarda"). Claims 9-17, and 26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Chan in view of widely used standard system bus embodiments, and further in view of Lichtman (U.S. Patent 5,787,246). Claims 9-17, and 26 are also rejected under 35 U.S.C. § 103(a) as being unpatentable over Sakarda in view of widely used standard system bus embodiments, and further in view of Lichtman.

I. Prior Art Rejections

Claim Rejections Under 35 U.S.C. §102(b)

Claims 1-8 and 18-25 are rejected under 35 U.S.C. § 102(b) as being anticipated by Chan. This rejection is respectfully traversed.

Independent claims 1, 10, and 18 specify a bus having a plurality of lines including at least one control line. The bus is in communication with a hard disk drive. A host controls a state of the control line such that communication with the hard disk drive via the bus is supported while the control line is in a first state and communication with the hard disk drive is suspended while the control line is in a second state. An

intermediate communications gateway disposed between the bus and the hard disk drive is responsive to the state of the control line and permits communication between the host and the hard disk drive while the control line is in the first state. When the control line is in the second state, the intermediate communications gateway isolates the hard disk drive from the bus. Furthermore, while the control line is in the second state, the host and the intermediate communications gateway cooperate to communicate data relating to the hard disk drive via the bus.

Chan discloses a computer system for reinitializing various system peripherals (such as IDE devices) after being hot-swapped. The system includes establishing correct master/slave relationships for each IDE device after the devices have been powered down, restarted, and reset (Col. 1, lines 10-36). The computer system (as shown in Fig. 2) includes a PCI Bus 106, 107 in communication with system controllers 112, 130, which are in communication with IDE interfaces 114, 134. The IDE interfaces connect one or more IDE devices such as a CD-ROM player or a disk drive. The insertion or removal of an IDE device from the computer system generates an interrupt and causes the computer system BIOS to put any existing devices to sleep, power off existing IDE devices, resetting the devices, and powering up the devices in a new configuration (i.e., establishing new master/slave relationships). Col. 4, lines 62-67 through Col. 5, lines 1-13.

Chan, however, fails to teach, disclose, or suggest an intermediate communications gateway, disposed between the bus and the hard disk drive, which is responsive to the state of a control line and, while the hard disk is isolated from the bus (i.e., while the control line is in a second state), enables data communications relating to

the hard disk drive between the hard disk drive and a host over a bus, as specified in claims 1, 10, and 18. On the contrary, Chan suggests that during a second control state (i.e., during a system reset) existing IDE devices are powered off. Such a state would prevent the communication of data between the hard disk and a host (e.g., the system controller 130).

For at least the aforementioned reasons, claims 1, 10, and 18 are allowable over Chan. Claims 2-8 depend from claim 1 and claims 19-25 depend from claim 18. Therefore 2-8 and 19-25 claims are allowable for at least the reasons discussed above with respect to independent claims 1 and 18 in addition to the additional features specified therein. For instance, dependent claims 2 and 19 specify that bus include chip select, address and data lines and that data relating to the hard disk drive is communicated between the host and the gateway via at least one of the chip select, address and data lines. Dependent claims 3 and 20 specify that the host provides control signals to the intermediate communications gateway via the bus while the at least one control line is in the second state such that the intermediate communications gateway is capable of subsequently providing instructions to the hard disk drive in accordance with the control signals. Dependent claims 5 and 22 specify that the intermediate communications gateway provides status signals to the host via the bus while the at least one control line is in the second state in response to a query from the host regarding status of the hard disk drive. Dependent claims 7 and 24 specify that the intermediate communications gateway supports local communication with the hard disk drive while the at least one control line is in the second state and the hard disk drive is isolated from said bus. Dependent claims 8 and 25 specify that the intermediate communications gateway continues to supply

power to the hard disk drive while the at least one control line is in the second state and the hard disk drive is isolated from said bus. As discussed above, Chan neither teaches, discloses, or suggests any of the aforementioned features. Accordingly, for at least the aforementioned reasons, the rejections of claims 1-8 and 18-25 should be withdrawn.

Claim Rejections Under 35 U.S.C. §102(e)

Claims 1-8 and 18-25 are rejected under 35 U.S.C. § 102(e) as being anticipated by Sakarda. This rejection is respectfully traversed.

Sakarda discloses a computer system for the identification and configuration of peripheral devices, which are inserted and removed (i.e., hot swapped) from a bay in the computer system. The system includes a secondary bridge connected through a PCI bus and a host bridge. A peripheral device bridge is connected to the secondary bridge. The peripheral bridge is connected to a number of bays which connect IDE devices such as hard disk drives. See Col. 4, lines 23-46. The peripheral device bridge identifies the bay into which a peripheral device is inserted or removed. If a device is inserted into a bay, a device driver identifies the device and permits communication between the device and the operating system in the computer system. See Col. 5, lines 2-9.

Sakarda, however, fails to teach, disclose, or suggest an intermediate communications gateway, disposed between the bus and the hard disk drive, which is responsive to the state of a control line and, while the hard disk is isolated from the bus (i.e., while the control line is in a second state), enables data communications relating to the hard disk drive between the hard disk drive and a host over a bus, as specified in claims 1, 10, and 18. On the contrary, Sakarda suggests that no communication occurs when a peripheral device is removed from the device bay connected to the peripheral

bridge (i.e., isolated from the PCI bus) and that communication between the device and the computer operating system occurs upon insertion of a peripheral device in the device bay. Since Sakarda fails to teach communications when a peripheral device is isolated from the PCI bus, claims 1, 10, and 18 are allowable for at least the aforementioned reasons.

Claims 2-8 depend from claim 1 and claims 19-25 depend from claim 18. Therefore 2-8 and 19-25 claims are allowable for at least the reasons discussed above with respect to independent claims 1 and 18 in addition to the additional features specified therein. For instance, dependent claims 2 and 19 specify that bus include chip select, address and data lines and that data relating to the hard disk drive is communicated between the host and the gateway via at least one of the chip select, address and data lines. Dependent claims 3 and 20 specify that the host provides control signals to the intermediate communications gateway via the bus while the at least one control line is in the second state such that the intermediate communications gateway is capable of subsequently providing instructions to the hard disk drive in accordance with the control signals. Dependent claims 5 and 22 specify that the intermediate communications gateway provides status signals to the host via the bus while the at least one control line is in the second state in response to a query from the host regarding status of the hard disk drive. Dependent claims 7 and 24 specify that the intermediate communications gateway supports local communication with the hard disk drive while the at least one control line is in the second state and the hard disk drive is isolated from said bus. Dependent claims 8 and 25 specify that the intermediate communications gateway continues to supply power to the hard disk drive while the at least one control line is in the second state and

the hard disk drive is isolated from said bus. As discussed above, Sakarda neither teaches, discloses, or suggests any of the aforementioned features. Accordingly, for at least the aforementioned reasons, the rejections of claims 1-8 and 18-25 should be withdrawn.

Claim Rejections Under 35 U.S.C. §103(a)

Claims 9-17, and 26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Chan in view of widely used standard system bus embodiments, and further in view of Lichtman. Claims 9-17, and 26 are also rejected under 35 U.S.C. § 103(a) as being unpatentable over Sakarda in view of widely used standard system bus embodiments, and further in view of Lichtman. Claims 9 depends from amended independent claim 1 and thus includes at least the same features of claim 1.

Claims 11-17 depend from amended independent claim 10 and thus include at least the same features of claim 10 in addition to the additional features specified therein. Claim 26 depends from claim 18 and thus includes at least the same features of claim 18. For instance, dependent claim 11 specifies that the AT bus also includes chip select, address and data lines, and that the host and the intermediate communications gateway communicate data relating to said IDE hard disk drive via at least one of the chip select, address and data lines while the RESET line is asserted. Dependent claim 12 specifies that the host provides control signals to the intermediate communications gateway via the AT bus while the RESET line is asserted such that the intermediate communications gateway is capable of subsequently providing instructions to the IDE hard disk drive in accordance with the control signals. Dependent claim 14 specifies that the intermediate communications gateway provides status signals to the host via the AT bus while the

RESET line is asserted in response to a query from the host regarding the status of the IDE hard disk drive. Dependent claim 16 specifies that the intermediate communications gateway supports local communication with the IDE hard disk drive while the RESET line is asserted and the IDE hard disk drive is isolated from the AT bus. Dependent claim 17 specifies that the intermediate communications gateway continues to supply power to the IDE hard disk drive while the RESET line is asserted and the IDE hard disk drive is isolated from said AT bus.

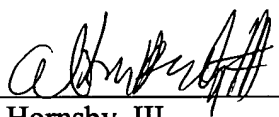
As discussed above, neither Chan nor Sakarda teaches, discloses, or suggests the features specified in independent claims 1, 10, and 18 as well as in dependent claims 9-17 and 26. The "widely used standard system bus embodiments" relied upon to cure the deficiencies of Chan and Sakarda disclose an alleged widely-known and practiced bus standard for communicating with IDE devices. Lichtman, as alleged in the Office Action, discloses device configuration for a system bus. However, neither the "widely used standard system bus embodiments" nor Lichtman, however, teaches, discloses, or suggests an intermediate communications gateway, which, while the hard disk is isolated from the bus, enables data communications relating to the hard disk drive between the hard disk drive and a host over a bus. Therefore the Applicant respectfully submits that the combined teachings of Chan in view of widely used standard system bus embodiments, and further in view of Lichtman and Sakarda in view of widely used standard system bus embodiments, and further in view of Lichtman does not make obvious Applicant's claimed invention as embodied in claims 9-17, and 26 for at least the aforementioned reasons. Accordingly, the rejections of claims 9-17, and 26 should be withdrawn.

CONCLUSION

For at least the aforementioned reasons, the Applicant asserts that the pending claims 1-26 are in condition for allowance. The Applicant further asserts that this response addresses each and every point of the Office Action, and respectfully requests that the Examiner pass this application with claims 1-26 to allowance. Should the Examiner have any questions, please contact Applicant's undersigned attorney at 404.954.5035.

Respectfully submitted,
MERCHANT & GOULD

Date: June 8, 2004



Alton Hornsby, III
Reg. No. 47,299

Merchant & Gould
P.O. Box 2903
Minneapolis, Minnesota 55402-0903
Telephone: 404.954.5100

